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IDENTIFICATION OF THE COMMERCIAL COMMON SHRIMP SPECIES

By Carter Broad *

INTRODUCTION

Only four out of the numerous species of shrimp found along the South Atlantic and Gulf coasts are of commercial importance. These are:

The common shrimp (Penaeus setiferus);
The grooved shrimp (Penaeus aztecus, and Penaeus duorarum);
The sea-bob (Xiphopenaeus kroyeri).

Since the fishermen do not distinguish between the species of grooved shrimp, all of these usually have been included under the single species (P. brasiliensis) and to the industry they are known as "brasilian" shrimp or "brownies."

Outstandingly the most important commercial species, the common or white shrimp (P. setiferus) is estimated to make up 85 to 90 percent of the total shrimp catch. However, in 1948, commercial fishermen in Texas reported that the majority of the catch at certain times of the season consisted of grooved shrimp. It has recently been established that there are mainly two species of grooved shrimp in the commercial catches--P. aztecus and P. duorarum. In order to assist fishermen to distinguish between these two species and the common shrimp, the University of North Carolina's Institute of Fisheries Research has prepared the following description and key to the various species of shrimp which are taken commercially in the waters of North Carolina. The sea-bob variety of grooved shrimp is not included in the key as it is not taken commercially on the South Atlantic Coast.

This key can be used by fishermen in all sections of the South Atlantic and Gulf Coasts to differentiate between the main species of shrimp encountered in the commercial catch. (Editors).

IDENTIFICATION

Commercially important shrimp of North Carolina fall into two groups distinguished from one another by the presence or absence of grooves along the back of the "head." If the body is divided into "head" and "tail" (cephalothorax and abdomen), then that part which is marketed is the "tail," and the part which is usually discarded is known as the "head."

The "head" bears the eyes, the feelers or "whiskers" (antennae), the horn (rostrum), the mouth and jaws, and the long, walking legs. Internally, the "head" contains the brain, the oesophagus and stomach, the heart, and most of the reproductive organs. Actually, it is a fusion of the true head and the thorax or chest of the animal and for convenience is referred to as the "head."

The "tail" bears externally the swimming legs and the fan-like legs of the last segment which, together with the middle portion, the telson, make up the true

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PENAEUS AZTECUS
(BROWN SHRIMP)

PENAEUS AZTECUS
(BROWN SHRIMP)

PENAEUS DUORARUM
(BROWN-SPOTTED SHRIMP)

tail. Internally, the "tail" contains the intestine, certain blood vessels and nerve cords and, in mature females, part of the ovaries. Again, this part of the animal (properly called the abdomen) is known conveniently as the "tail."

Although the color of shrimp is not always a valid character for distinguishing species, the two most common shrimp of the South Atlantic Coast are known as the green or white shrimp and the brown shrimp. A great many names are given to these two species, some of which are applied to both forms. As already mentioned, the most easily recognized character distinguishing the green shrimp from the brown is the head grooves of the brown shrimp.

PENAEUS SETIFERUS
(WHITE SHRIMP)

Common Shrimp: The most common shrimp of the South Atlantic Coast is known in North Carolina as the green shrimp (P. setiferus). The horn of the green shrimp is long. It is edged in dark color and blends into the head about two-thirds of the way back. The green shrimp is whitish in color and usually somewhat softer than the two brown shrimp. Its tail is edged in green. Its feelers, or "whiskers," are over twice as long as its body and are dark. The last segment of the "tail" is keeled on top and edged in dark color.

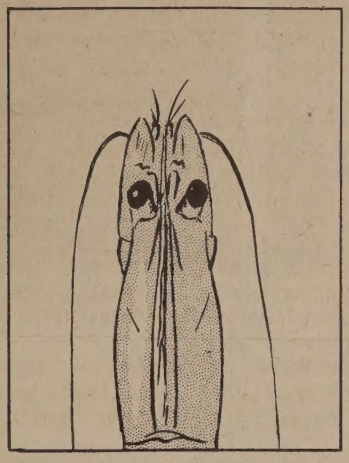
Brown Shrimp: The brown shrimp (P. azterus) is usually tinted in a brownish or orange hue. The horn is shorter than that of the green shrimp and continues as a low keel to the posterior margin of the head. It is bordered on each side by a deep groove. Its tail is edged in hues of purple or blue, ranging from a red-purple to sky blue. Its feelers are less than twice as long as its body and are usually a dull orange color. The last segment of the tail is keeled and grooved as the head.

Brown-Spotted Shrimp: A variety of brown shrimp is known as the brown-spotted shrimp (P. duorarum). This shrimp resembles the brown shrimp but has a reddish or brown spot on each side at about the middle of the "tail." In color it sometimes tends to be bluish or blue-grey. Its tail is edged in blue.

WHAT KIND OF SHRIMP DO YOU CATCH?

LOOK AT THE HEAD.

Is it grooved?



GROOVED HEAD

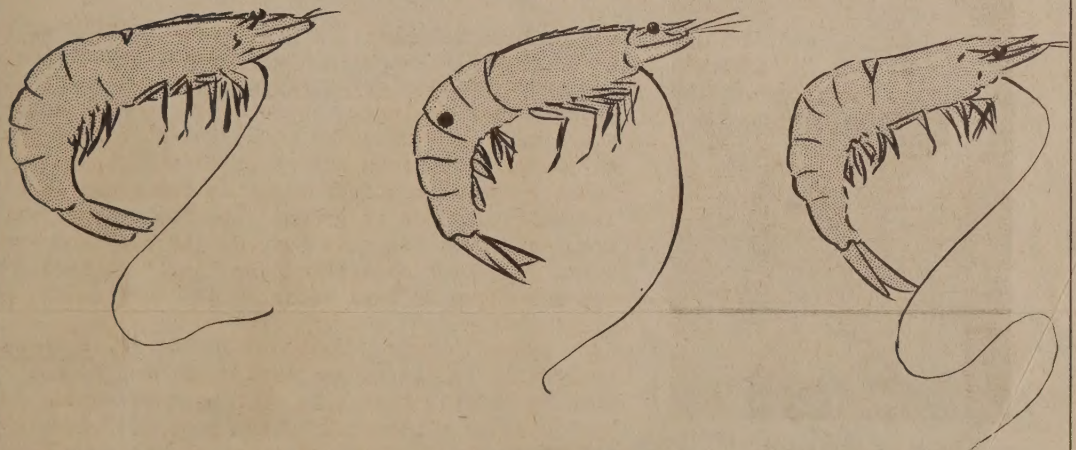
PENAEUS AZTECUS (BROWN SHRIMP)
OR
PENAEUS DUORARUM (BROWN-SPOTTED SHRIMP)

WITHOUT GROOVE

PENAEUS SETIFERUS (WHITE SHRIMP)

LOOK AT THE BODY.

Does it have a spot?



PENAEUS AZTECUS
(BROWN SHRIMP)

1. SHORT HORN
2. SHORT FEELERS
3. GROOVED HEAD
4. NO SPOT

PENAEUS DUORARUM
(BROWN-SPOTTED SHRIMP)

1. SHORT HORN
2. SHORT FEELERS
3. GROOVED HEAD
4. SPOT ON TAIL

PENAEUS SETIFERUS
(WHITE SHRIMP)

1. LONG HORN
2. LONG FEELERS
3. NOT-GROOVED HEAD
4. NO SPOT

PENAEUS SETIFERUS
(WHITE SHRIMP)

Common Names Used: Many different names are applied to shrimp in different localities. The same name may be used to describe two different species in different parts of the same State. Thus, blue-tailed shrimp is used to describe the brown-spotted shrimp around Beaufort and the green shrimp around Ocracoke. It is convenient to standardize these names in order to avoid confusion in identifying the various species of shrimp. Each animal has a scientific name which is the same for the same species in every part of the world. The scientific names for the three species of shrimp described are listed below with some of the common names and the localities in which these names are used:

Penaeus setiferus	Green shrimp (Southport, N. C.) White shrimp Green-tailed shrimp (Pamlico Sound) Blue-tailed shrimp (Ocracoke, N. C.) Common shrimp Lake shrimp (Louisiana)
Penaeus aztecus	Brown shrimp (Southport, N. C.) Grooved shrimp Brazilian shrimp Golden shrimp (Texas) "Brownies" Red shrimp (Texas)
Penaeus duorarum	Brown-spotted shrimp Grooved shrimp Blue-tailed shrimp (Carteret Co., N. C.) Channel shrimp (Carteret Co., N. C.)

"Red-legged shrimp" may be any species of shrimp if its legs are red. Any species of shrimp may turn bluish and its meat may become soft and white. It is then known as a "blue shrimp" or "cotton shrimp." These names may be said to describe a physiological condition rather than a species.

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